UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,065	07/23/2001	Yuji Ando	211448US6CIP	3243

			EXAMINER
22850	7590	03/23/2004	DO, ANH HONG

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ART UNIT	PAPER NUMBER
2624	8

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

MN

Office Action Summary	Application No. 09/910,065	Applicant(s) ANDO ET AL.
	Examiner ANH H DO	Art Unit 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) *7-44* is/are allowed.
6)☒ Claim(s) *1 and 4* is/are rejected.
7)☒ Claim(s) *2,3,5 and 6* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>23 July 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☒ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☒ Certified copies of the priority documents have been received in Application No. <u>09/351,010</u>.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>6</u>.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

09/351,010, filed on 7/12/1999. *Specification*

2.   The title of the invention is redundant. A new title is required that is clearly and

precisely indicative of the invention to which the claims are directed.

The following title is suggested: "Motion Vector Detection Apparatus, Method and

Record Medium".

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

The claimed feature "obtaining a residual between orthogonally transformed data

of the block of the reference picture and orthogonally transformed data of each block of

the current picture" has not been described in the specification. Although on exemplary

page 27, the DCT process is performed for the difference between the data of the

current picture and the data of the reference picture, the claimed feature "obtaining a

residual between orthogonally transformed data of the block of the reference picture

and orthogonally transformed data of each block of the current picture" is found

nowhere.

Drawings

5.   Figure s 1-3 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction

or corrected drawings are required in reply to the Office action to avoid abandonment of

the application. The objection to the drawings will not be held in abeyance.

6.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the "obtaining a

residual between orthogonally transformed data of the block of the reference picture

and orthogonally transformed data of each block of the current picture" must be shown

or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings

will not be held in abeyance.

Allowable Subject Matter

7.   Claims 7-44 are allowed.

8.   Claims 1 and 4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9.   Claims 2, 3, 5, and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10.   The following is a statement of reasons for the indication of allowable subject matter:

Regarding independent claims 4 and 7, the prior art, either taken singly or in combination, does not teach:

- obtaining a residual between orthogonally transformed data of the block of the reference picture and orthogonally transformed data of each block of the current picture.

Regarding independent claims 7 and 12, the prior art, either taken singly or in combination, does not teach:

- when the residual is larger than the predetermined threshold value, stopping the calculation of the motion vector; setting the initial value of the predetermined threshold value corresponding to a characteristic of a picture.

Regarding independent claims 17 and 20, the prior art, either taken singly or in combination, does not teach:

- motion calculating means for calculating a motion vector of the entire picture with motion vectors of individual macro blocks detected by said first motion detecting means; second motion detecting means for calculating a motion vector of each macro block with the motion vector calculated by said motion calculating means.

Regarding independent claims 23 and 26, the prior art, either taken singly or in combination, does not teach:

- controlling means for skipping the predetermined process performed by said picture data process means corresponding to the determined result of said determining means and causing said encoding means to perform the encoding process.

Regarding independent claims 29 and 32, the prior art, either taken singly or in combination, does not teach:

- extracting N pixels of the current picture and N pixels of the reference picture at a time (where N is an integer); reading pixels of the block of the current picture and pixels of the block of the reference picture as successive data from the memory so as to obtain a residual.

Regarding independent claims 35 and 38, the prior art, either taken singly or in combination, does not teach:

- extracting N pixels of the current picture and N pixels of the reference picture at a time (where N is an integer); wherein step (c) is performed with the N pixels of the current picture and the N pixels of the reference picture stored as successive data in the

second memory; wherein step (e) is performed with the pixels of the current picture and the pixels of the reference picture stored in the first memory.

Regarding independent claims 41 and 43, the prior art, either taken singly or in combination, does not teach:

- comparing contour pixels of the block of the reference picture with contour pixels of the block of the current picture so as to obtain a residual therebetween.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 22, 2004.

ANH HONG DO
PRIMARY EXAMINER